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3 **IN THE CLAIMS**

4 Please substitute the previously pending set of claims with the below-identified  
5 set of claims (which include new claims 34-53). In accordance with 37 C.F.R. §  
6 1.121(c)(3), a clean copy of all of the claims is presented below. In accordance with 37  
7 C.F.R. § 1.121(c)(1)(ii), a marked-up copy of just the amended claims appears in the  
8 appendix attached hereto.

9  
10 1. [Amended] A video input system for pre-processing video signals, the system  
11 comprising:

12 a video input module for receiving and forwarding one or more live video signals,  
13 the video input module producing a forwarded video signal for each received live video  
14 signal;

15 a first multiplexer, coupled to a memory and to the video input module, for  
16 receiving a first stored video signal from the memory, or for receiving one of the  
17 forwarded video signals produced in the video input module, and for providing an output  
18 signal VS<sub>1</sub> defined as the first stored video signal or defined as the one of the forwarded  
19 video signals;

20 a first video pipeline for pre-processing VS<sub>1</sub>, the first video pipeline producing a  
21 first pre-processed video signal;

22 a second multiplexer, coupled to the memory and to the video input module, for  
23 receiving a second stored video signal from the memory, or for receiving one of the  
24 forwarded video signals produced in the video input module, and for providing an output  
25

1 signal VS<sub>2</sub> defined as the second stored video signal or defined as the one of the  
2 forwarded video signals; and

3 a second video pipeline for pre-processing VS<sub>2</sub>, the second video pipeline  
4 producing a second pre-processed video signal.

5  
6 2. [Not Amended] The video input system according to claim 1 wherein the video  
7 input module further comprises:

8 an ancillary data extractor, the extractor removing ancillary data from at least one  
9 of the live video signals converted in the video input module.

10  
11 3. [Not Amended] The video input system according to claim 1 wherein the  
12 received live video signal is VS, wherein VS is an analog composite video signal, an  
13 analog component video signal, a serial digital composite video signal, a serial digital  
14 component video signal, a parallel digital composite video signal, or a parallel digital  
15 component video signal.

16  
17 4. [Amended] The video input system according to claim 1 wherein the forwarded  
18 video signal includes D, wherein D is color data, alpha data, or color and alpha data.

19  
20 5. [Not Amended] The video input system according to claim 1 wherein at least  
21 one of the pre-processed video signals is e-VS, wherein e-VS is an RGB encoded video  
22 signal, an RGBA encoded video signal, a YUV-Type encoded video signal, or a  
23 YUVA-Type encoded video signal.  
24  
25

1           6. [Not Amended] The video input system according to claim 1 wherein the first  
2 pre-processed video signal is output to a storage medium and the second pre-processed  
3 video signal is forwarded to a video graphics processor.  
4

5           7. [Not Amended] The video input system according to claim 1 wherein the first  
6 pre-processed video signal is output to a storage medium and the second pre-processed  
7 video signal is forwarded to a video output system.  
8

9           8. [Not Amended] The video input system according to claim 1 wherein the first  
10 pre-processed video signal is forwarded to a video graphics processor and the second  
11 pre-processed video signal is forwarded to a video output system.  
12

13           9. [Not Amended] The video input system according to claim 1 wherein the  
14 process of pre-processing includes changing the sample rate of the video signal being  
15 pre-processed.  
16

17           10. [Not Amended] The video input system according to claim 1 wherein the  
18 process of pre-processing includes gamma removal.  
19

20           11. [Not Amended] The video input system according to claim 1 wherein the  
21 process of pre-processing includes gamma insertion.  
22

23           12. [Not Amended] The video input system according to claim 1 wherein the  
24 process of pre-processing includes color space conversion.  
25

1 13. [Not Amended] The video input system according to claim 1 wherein the  
2 process of pre-processing includes dithering.

3  
4 14. [Not Amended] The video input system according to claim 1 wherein the  
5 process of pre-processing includes scaling.

6  
7 15. [Not Amended] The video input system according to claim 1 wherein the  
8 process of pre-processing includes addressing on a frame-by-frame basis the video signal  
9 being pre-processed.

10  
11 16. [Not Amended] The video input system according to claim 1 wherein the  
12 system is a Peripheral Component Interconnect circuit board.

13  
14 17. [Amended] A method for pre-processing video signals, the method  
15 comprising:

16 receiving one or more live video signals in a video input module and forwarding  
17 the one or more live video signals, producing a forwarded video signal for each received  
18 live video signal;

19 receiving, in a first multiplexer coupled to a memory and to the video input  
20 module, a first stored video signal from the memory, or one of the forwarded video  
21 signals produced in the video input module, and providing an output signal  $VS_1$  defined  
22 as the first stored video signal or defined as the one of the forwarded video signals;

23 pre-processing  $VS_1$  through a first video pipeline to produce a first pre-processed  
24 video signal;  
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1 receiving, in a second multiplexer coupled to the memory and to the video input  
2 module, a second stored video signal from the memory, or one of the forwarded video  
3 signals produced in the video input module, and providing an output signal VS<sub>2</sub> defined  
4 as the second stored video signal or defined as the one of the forwarded video signals;  
5 and

6 pre-processing VS<sub>2</sub> through a second video pipeline to produce a second  
7 pre-processed video signal.

8  
9 18. [Not Amended] The method according to claim 17, further comprising:  
10 removing ancillary data from at least one of the live video signals prior to  
11 converting the at least one live video signal.

12  
13 19. [Not Amended] The method according to claim 17 wherein the received live  
14 video signal is VS, wherein VS is an analog composite video signal, an analog  
15 component video signal, a serial digital composite video signal, a serial digital  
16 component video signal, a parallel digital composite video signal, or a parallel digital  
17 component video signal.

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18  
19 20. [Amended] The method according to claim 17 wherein the forwarded video  
20 signal includes D, wherein D is color data, alpha data, or color and alpha data.

21  
22 21. [Not Amended] The method according to claim 17 wherein at least one of the  
23 pre-processed video signals is e-VS, wherein e-VS is an RGB encoded video signal, an  
24 RGBA encoded video signal, a YUV-Type encoded video signal, or a YUVA-Type  
25 encoded video signal.

1  
2 22. [Not Amended] The method according to claim 17 wherein the first  
3 pre-processed video signal is output to a storage medium and the second pre-processed  
4 video signal is forwarded to a video graphics processor.  
5

6 23. [Not Amended] The method according to claim 17 wherein the first  
7 pre-processed video signal is output to a storage medium and the second pre-processed  
8 video signal is forwarded to a video output system.  
9

10 24. [Not Amended] The method according to claim 17 wherein the first  
11 pre-processed video signal is forwarded to a video graphics processor and the second  
12 pre-processed video signal is forwarded to a video output system.  
13

14 25. [Not Amended] The method according to claim 17 wherein the process of  
15 pre-processing includes changing the sample rate of the video signal being pre-processed.  
16

17 26. [Not Amended] The method according to claim 17 wherein the process of  
18 pre-processing includes gamma removal.  
19

20 27. [Not Amended] The method according to claim 17 wherein the process of  
21 pre-processing includes gamma insertion.  
22

23 28. [Not Amended] The method according to claim 17 wherein the process of  
24 pre-processing includes color space conversion.  
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1 29. [Not Amended] The method according to claim 17 wherein the process of  
2 pre-processing includes dithering.

3  
4 30. [Not Amended] The method according to claim 17 wherein the process of  
5 pre-processing includes scaling.

6  
7 31. [Not Amended] The method according to claim 17 wherein the process of  
8 pre-processing includes addressing on a frame-by-frame basis the video signal being  
9 pre-processed.

10  
11 32. [Amended] A video input system for pre-processing video signals, the system  
12 comprising:

13 input means for receiving one or more live video signals and for forwarding the  
14 one or more live video signals, producing a forwarded video signal for each received live  
15 video signal;

16 first multiplexing means, coupled to a memory and to the input means, for  
17 receiving a first stored video signal from the memory or for receiving one of the  
18 forwarded video signals produced in the input means, and for providing an output signal  
19 VS<sub>1</sub> defined as the first stored video signal or defined as the one of the forwarded video  
20 signals;

21 means for pre-processing VS<sub>1</sub> through a first video pipeline to produce a first  
22 pre-processed video signal;

23 second multiplexing means, coupled to the memory and to the input means, for  
24 receiving a second stored video signal from the memory or for receiving one of the  
25 forwarded video signals produced in the input means, and for providing an output signal

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1 VS<sub>2</sub> defined as the second stored video signal or defined as the one of the forwarded  
2 video signals; and

3 means for pre-processing VS<sub>2</sub> through a second video pipeline to produce a  
4 second pre-processed video signal.

5  
6 33. [Amended] The system according to claim 32, further comprising:

7 means for removing ancillary data from at least one of the live video signals prior  
8 to converting the at least one live video signal.

9  
10 34. [New] The video input system according to claim 1 wherein the forwarded  
11 video signal received by the first multiplexer is the same as the forwarded video signal  
12 received by the second multiplexer.

13  
14 35. [New] The video input system according to claim 1 wherein the forwarded  
15 video signal received by the first multiplexer is different than the forwarded video signal  
16 received by the second multiplexer.

17  
18 36. [New] The video input system according to claim 1, further comprising:  
19 a third multiplexer for receiving the first pre-processed video signal and for  
20 routing an output signal based thereon to one of: a video output system, a video graphics  
21 processor, and a storage medium; and

22 a fourth multiplexer for receiving the second pre-processed video signal and for  
23 routing another output signal based thereon to one of: the video output system, the video  
24 graphics processor, and the storage medium.  
25



1 37. [New] The video input system according to claim 1 wherein the video input  
2 module is detachably coupled to a video processing module, wherein the video  
3 processing module includes the first multiplexer, the second multiplexer, the first video  
4 pipeline, and the second video pipeline.

5  
6 38. [New] The video input system according to claim 37, wherein the video input  
7 module is a daughterboard module that couples to the video processing module.

8  
9 39. [New] The video input system according to claim 37, wherein the video input  
10 module includes a processor that is configured to inform the video processing module of  
11 its specific configuration.

12  
13 40. [New] A video input system for pre-processing video signals, the system  
14 comprising:

15 a video input module for receiving and forwarding a live video signal;

16 a first video pipeline for pre-processing the forwarded video signal to produce a  
17 first pre-processed video signal, wherein the pre-processing in the first video pipeline  
18 includes one of: up sampling, down sampling, gamma insertion, gamma removal, color  
19 space conversion, scaling, and dithering; and

20 a second video pipeline for pre-processing a stored video signal received from a  
21 memory to produce a second pre-processed video signal, wherein the pre-processing in  
22 the second video pipeline includes one of: up sampling, down sampling, gamma  
23 insertion, gamma removal, color space conversion, scaling, and dithering.

41. [New] A video input system for pre-processing video signals, the system comprising:

a video input module for receiving and forwarding a first live video signal and a second live video signal;

a first video pipeline for pre-processing the first forwarded video signal to produce a first pre-processed video signal, wherein the pre-processing in the first video pipeline includes one of: up sampling, down sampling, gamma insertion, gamma removal, color space conversion, scaling, and dithering; and

a second video pipeline for pre-processing the second forwarded video signal to produce a second pre-processed video signal, wherein the pre-processing in the second video pipeline includes one of: up sampling, down sampling, gamma insertion, gamma removal, color space conversion, scaling, and dithering.

42. [New] A video input system for pre-processing video signals, the system comprising:

a video input module for receiving and forwarding a video signal;

a first video pipeline for pre-processing the forwarded video signal to produce a first pre-processed video signal, wherein the pre-processing in the first video pipeline includes one of: up sampling, down sampling, gamma insertion, gamma removal, color space conversion, scaling, and dithering; and

a second video pipeline for pre-processing the same forwarded video signal to produce a second pre-processed video signal, wherein the pre-processing in the second video pipeline includes one of: up sampling, down sampling, gamma insertion, gamma removal, color space conversion, scaling, and dithering,

1 wherein the video input system is configured to forward the first pre-processed  
2 video signal to a storage medium, and

3 wherein the video input system is configured to forward the second pre-processed  
4 video signal to a display.

5 ~~38~~ 17  
6 ~~43~~. [New] The method according to claim 17 wherein the forwarded video signal  
7 received by the first multiplexer is the same as the forwarded video signal received by the  
8 second multiplexer.

9 ~~39~~  
10 ~~44~~. [New] The method according to claim 17 wherein the forwarded video signal  
11 received by the first multiplexer is different than the forwarded video signal received by  
12 the second multiplexer.

13 ~~40~~  
14 ~~45~~. [New] The method according to claim 17, further comprising:  
15 receiving, in a third multiplexer, the first pre-processed video signal, and routing  
16 an output signal based thereon to one of: a video output system, a video graphics  
17 processor, and a storage medium; and

18 receiving, in a fourth multiplexer, the second pre-processed video signal, and  
19 routing another output signal based thereon to one of: the video output system, the video  
20 graphics processor, and the storage medium.

21  
22 46. [New] The method according to claim 17 wherein the video input module is  
23 detachably coupled to a video processing module, wherein the video processing module  
24 includes the first multiplexer, the second multiplexer, the first video pipeline, and the  
25 second video pipeline.

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1  
2 47. [New] The method according to claim 45 wherein the video input module is a  
3 daughterboard module that couples to the video processing module.  
4

5 48. [New] The method according to claim 45 wherein the video input module  
6 includes a processor that is configured to inform the video processing module of its  
7 specific configuration.  
8

9 49. [New] A method for pre-processing video signals, the method comprising:  
10 receiving a live video signal in a video input module and forwarding the live  
11 video signal;  
12

13 pre-processing the forwarded video signal through a first video pipeline to  
14 produce a first pre-processed video signal, wherein the pre-processing in the first video  
15 pipeline includes one of: up sampling, down sampling, gamma insertion, gamma  
16 removal, color space conversion, scaling, and dithering; and  
17

18 pre-processing a stored video signal received from a memory through a second  
19 video pipeline to produce a second pre-processed video signal, wherein the pre-  
20 processing in the second video pipeline includes one of: up sampling, down sampling,  
21 gamma insertion, gamma removal, color space conversion, scaling, and dithering.  
22

23 50. [New] A method for pre-processing video signals, the method comprising:  
24 receiving a live video signal in a video input module and forwarding the live  
25 video signal to provide a first forwarded video signal, and receiving another live video  
signal in the video input module and forwarding the other video signal to provide a  
second forwarded video signal;

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*a*

1 pre-processing the first forwarded video signal through a first video pipeline to  
2 produce a first pre-processed video signal, wherein the pre-processing in the first video  
3 pipeline includes one of: up sampling, down sampling, gamma insertion, gamma  
4 removal, color space conversion, scaling, and dithering; and

5 pre-processing the second forwarded video signal received from a memory  
6 through a second video pipeline to produce a second pre-processed video signal, wherein  
7 the pre-processing in the second video pipeline includes one of: up sampling, down  
8 sampling, gamma insertion, gamma removal, color space conversion, scaling, and  
9 dithering.

10  
11 51. [New] A method for pre-processing video signals, the method comprising:  
12 receiving a live video signal in a video input module and forwarding the live  
13 video signal;

14 pre-processing the forwarded video signal through a first video pipeline to  
15 produce a first pre-processed video signal, wherein the pre-processing in the first video  
16 pipeline includes one of: up sampling, down sampling, gamma insertion, gamma  
17 removal, color space conversion, scaling, and dithering;

18 forwarding the first pre-processed video signal to a storage medium;

19 pre-processing the same forwarded video signal through a second video pipeline  
20 to produce a second pre-processed video signal, wherein the pre-processing in the second  
21 video pipeline includes one of: up sampling, down sampling, gamma insertion, gamma  
22 removal, color space conversion, scaling, and dithering; and

23 forwarding the second pre-processed video signal to a display.  
24  
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[New] A video input system for pre-processing video signals, the system comprising:

a video input module for receiving and forwarding one or more live video signals, the video input module producing a forwarded video signal for each received live video signal;

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a first video pipeline for pre-processing  $VS_1$ , wherein the video input system is configured to receive  $VS_1$  as a first stored video signal in one input configuration, and the video input system is configured to receive  $VS_1$  as one of the forwarded video signals produced in the video input module in another input configuration, the first video pipeline producing a first pre-processed video signal; and

a second video pipeline for pre-processing  $VS_2$ , wherein the video input system is configured to receive  $VS_2$  as one of the same video signal being pre-processed in the first video pipeline in one input configuration, and the video input system is configured to receive  $VS_2$  as one of the other forwarded video signals produced in the video input module in another input configuration, and the video input system is configured to receive  $VS_2$  as a second stored video signal in another input configuration, the second video pipeline producing a second pre-processed video signal,

wherein the pre-processing in the first video pipeline makes changes to displayable video content in the signal  $VS_1$ ,

and wherein the pre-processing in the second video pipeline makes changes to displayable video content of the signal  $VS_2$ .

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[New] A method for pre-processing video signals, the method comprising:

1 receiving one or more live video signals in a video input module and forwarding  
2 the one or more live video signals, producing a forwarded video signal for each received  
3 live video signal;

4 selecting an input configuration used to define a signal  $VS_1$ , wherein in one input  
5 configuration,  $VS_1$  is a first stored video signal, and in another input configuration,  $VS_1$  is  
6 one of the forwarded video signals produced in the video input module;

7 pre-processing  $VS_1$  through a first video pipeline, producing a first pre-processed  
8 video signal;

9 selecting an input configuration used to define  $VS_2$ , wherein in one input  
10 configuration,  $VS_2$  is the same video signal being pre-processed in the first video  
11 pipeline, and in another input configuration,  $VS_2$  is one of the other forwarded video  
12 signals produced in the video input module, and in another input configuration  $VS_2$  is a  
13 second stored video signal; and

14 pre-processing  $VS_2$  through a second video pipeline, producing a second  
15 pre-processed video signal,

16 wherein the pre-processing in the first video pipeline makes changes to  
17 displayable video content in the signal  $VS_1$ ,

18 and wherein the pre-processing in the second video pipeline makes changes to  
19 displayable video content of the signal  $VS_2$ .